

# CHARLES ST. BOILER REPLACEMENT PROJECT

*A real example of a municipal building retrofit*

## **Project Description**

The Charles Street HVAC Upgrade Project replaces the existing 60-year old steam unit heater system with approximately 660 linear feet of gas-fired radiant heaters. The radiant heaters will keep workers warm without heating the entire space by using radiant heat transfer instead of convective or conductive heat transfer. This will save the City approximately 35% in energy costs.

## **Project Sponsor**

Finance and Administrative Services

## **Project Cost**

\$1.4 million

## **Project Timeframe**

Construction – October 2010 to January 2011

## **Energy Benefits**

The new system will save 29,255 Therms per year of natural gas, which will reduce CO<sub>2</sub> emissions by 342,284 pounds per year.



## BEFORE



# EXHAUST FAN REPLACEMENT PROJECT

*A real example of a hospital facility retrofit*

## **Project Description**

This project consists of replacing an existing supply and exhaust fan system serving areas of the hospital. A newer technology called a Fan Wall will replace one large fan with many smaller high efficiency fans. This system will have Variable Frequency Drives that increase the overall efficiency of the system. Multiple smaller fans allow for the critical system reliability that a Level 1 Trauma Hospital needs. The fan system will be designed to meet current airflow requirements. But, it will also be able to easily increase or decrease airflow to meet new energy building code standards and still supply correct amount of air to meet patient care needs.

## **Project Sponsor**

Harborview Medical Center and Community Power Works

## **Project Cost**

\$2.5 million

## **Project Timeframe**

Construction will begin in early 2011.

## **Energy Benefits**

The new system will save 205,000 kWh per year of electrical energy and 14,700 therms per year of steam energy.



**BEFORE**



**AFTER**

